EDEN – An Epigraphic Web Database of Ancient Inscriptions

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The Epigraphic Database Erlangen-Nürnberg (EDEN, http://wisski.cs.fau.de/eden/) provides online access to the inscriptions of the ancient cities of Metropolis in Ionia and Magnesia ad Maeander. It contains the rather small number of approx. 600 inscriptions – mainly Greek, but also Latin – enriched with plenty of metadata, translations of the inscriptions in English and German, scholarly commentaries, images, and further information about the main topics like persons and deities. As such it aims to be not only a portal for resaerchers from both disciplines, ancient history and archeology, but also for students, pupils, and the wider public. The database is still in development: new inscriptions keep being published and metadata is provided in more and more detail.

This talk, however, does not focus so much on EDEN's content but on its technical basis. The database is built using the open source virtual research environment framework WissKI (http://wiss-ki.eu) which itself is an extension of the content management system Drupal (http://drupal.org). WissKI allows to store the inscriptions and their metadata genuinely as a semantic network using Linked Open Data and Semantic Web technologies. Thus, it allows to easily define and draw links between the pieces of information, implementing a flexible data model. The model is provided as an OWL ontology which extends the CIDOC Conceptual Reference Model (CIDOC CRM / ISO 21127, http://cidoc-crm.org). Through the network's nature there is no traditional record structure. For a better user experience, however, the system aggregates information stored in the network and displays it as „virtual records" in a traditional Wikipedia-like fashion for presentation, editing and searching. As a consequence, every node in the network can be a primary object of study as well as mere metadata at the same time. Thus, the data model can be extended without much refactoring. The talk shows how this feature is exploited in EDEN to gradually extend the available information, shifting its focus from inscriptions to places, dates and – most recently – persons and their roles.

EDEN primarily incorporates structured (linked) data as well as images and different categories of free text, formatted as HTML: transcriptions, translations, and scholarly commentaries. The information expressed as free text can be unlocked by semantically annotating entities like places, dates, and persons and linking them to the existing structured data. The annotations are woven into the HTML and stored together with the text. WissKI can automatically extract these annotations and generate RDF triples from it that get added to the semantic network, often building bridges between the structured data acquired through the „virtual records". In a further step, the system and network structure easily allow for complex relations to be explored, like the use of persons' roles through the centuries. Experience shows, however, that oftentimes reliable data is too sparse and thus results have to be interpreted carefully.

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